QUESTIONS TO BE ANSWERED FOR INTEGRATION OF ADVANCED LIFE SUPPORT SERVICES IN FIRE-BASED EMS

EXECUTIVE DEVELOPMENT

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Abstract

A duty to serve and an opportunity from growth prompted The Overland Park Fire Department, Inc. to explore an increased level of EMS provision. The problem prompting this research was that there was no clear decision in making a transition of this scope.

The purpose of this evaluative research was to develop objective benchmarks to determine if the implementation of advance life support (ALS) within the departments service was prudent. The questions posed were:

1. How receptive is the organization to commit to quality ALS care?
2. What will it cost the customer and organization?
3. Can the organization provide a better level of care than is currently provided?
4. How does the organization intend to implement the increased level of care?

The literature review discovered texts and articles debating the provision of fire-based EMS at the ALS level. One survey was conducted to measure the organization's opinion of providing ALS care and what benefit would be provided to the customer and organization.

The results indicated that fire-based ALS was an efficient service, both financially and operationally. Response time analysis showed that a substantial impact in patient care is obtainable with advanced airways, medications, and electrical therapy in the hands of first responders.

Recommendations included a phased approach to the implementation of advanced life support services; ensuring quality patient care with adequate training, practical experience, and diligent supervision.

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Introduction

The Overland Park Fire Department, Inc. (OPFD) provides fire suppression, technical rescue, and emergency medical services to the 140,000 citizens of Overland Park, Kansas. In 1997 OPFD responded to over 10,000 calls. 65% of these responses were for a request of medical attention of some sort. Since 1968 OPFD has provided basic life support and first responder services. This level of medical service has remained unchanged (P. Mays, personal communication, September 11, 1998).

With the population of Overland Park increasing at a rate of 3% per year and an average of 2,000,000 sq. ft. of commercial property a year, OPFD feels obligated to audit the level and quality of service provided. One aspect of service that remains a constant debate is the addition of advanced life support (ALS) into their operation. As in years past, OPFD had diversified their service to address the needs of their citizens that the department felt were unmet (e.g. hazardous materials, confined space, high-angle rescue). The problem facing OPFD in regards to the provision of ALS is not because of a lack of resources however; the issue has been a political decision not to compliment the existing ALS provider for simplicity (P. Mays, personal communication, September 11, 1998).

As a result, OPFD stands at the threshold of a new millennium reevaluating their level of EMS care that they will provide to their customers. In 1999, OPFD will complete construction of their fifth station. In order to staff this new station and replace retiring firefighters, OPFD will introduce 20-25 people in the next two years. The level of EMS certification these people will be required to have is the debate (D. Meyers, personal communication, June 17, 1998).

The purpose of this research is to develop objective benchmarks in determining what is in the best interest of the customers, as well as the organization, for the implementation of advanced life

support services within the Overland Park Fire Department, Inc. The evaluative research method was used. The following research questions were posed:

1. How receptive is the organization to commit to quality ALS care?
2. What will it cost the customer and organization?
3. Can the organization provide a better level of care than is currently provided?
4. How does the organization intend to implement the increased level of care?

Background and Significance

Overland Park Fire Department, Inc.

The Overland Park Fire Department, Inc. serves the twenty-fourth fastest growing city in the United States. The department's budget will exceeded $10,000,000 for the first time in 1999. The city covers 55.7 square miles with 139,840 citizens. As of 1998, OPFD is nearing their 80th year of existence and operates 4 engine companies, 3 ladder companies, 1 tanker, 1 heavy rescue, and 4 basic life-support ambulances out of 4 stations (M. Hunter, personal communication, October 1, 1998).

In 1968 OPFD took their first progressive step into emergency medical services with the implementation of a first-aid ambulance service. This service provided pre-hospital care and transport to their citizens utilizing cross-trained firefighters. This level of service has remained unchanged since its upgrade to basis life support (BLS) when the emergency medical technician (EMT) program was unveiled in the mid-seventies (P. Mays, personal communication, September 11, 1998).

Through the years, OPFD has witnessed the ratio of fire to EMS responses change dramatically. Today, EMS accounts for 65% of total calls for service. The senior management staff constantly analyzes the level of EMS care provided. Historically, the staff has felt comfortable with the

care provided. This comfort level was due to the acceptable response times of the current ALS provider for the county and the fact that customer needs did not indicate the need for increased resources in EMS. Between 1992-1998 this comfort level has diminished. This is not due to poor performance of the current ALS provider, but from existing resources available within the fire department to increase customer service and organizational survivability (S. Isaacson, personal communication, May 8, 1998).

In 1996, Overland Park Fire, Inc. began billing all BLS and non-emergent transfer patients that they transported. This fee was used to offset the increased operating cost due to the increased call load. The revenue generated allowed the introduction of a part-time day ambulance. This unit is available for transfers and station coverage when full-time ambulances are out-of-service for training or alarms. This service was at no additional cost to the community as a whole (S. Isaacson, personal communication, May 8, 1998).

As mentioned earlier, OPFD will be expanding in 1999. The introduction of possibly 25 people would be a 20% increase in the total organization. OPFD feels that if objective benchmarks indicate a need for an increased level of EMS care, now is the perfect opportunity for transition (D. Meyers, personal communication, June 17, 1998).

Johnson County Med-Act

In 1975, Johnson County, Kansas established an ALS provider encompassing the entire county including the city of Overland Park. Med-Act ambulances were allocated throughout the county based on call load. Historically, Med-Act has provided a progressive service with the highest standard of quality. The city of Overland Park accounts for 33% of Med-Act's total budget

which exceeded $9,000,000 for the first time in 1998. As of 1998, Med-Act operates 11 ALS ambulances, 3 ALS non-transport units, and 3 supervisor units. Med-Act stations 2 of these units in the city of Overland Park. Med-Act interfaces with all fire departments in Johnson county. Their service exclusively provides ALS treatment and transport of all patients requiring acute care (S. Isaacson, personal communication, May 8, 1998).

Johnson County Kansas

Johnson county is one of the richest counties in the nation with an average household buying income of $51,188. The county has 418,267 people residing within 21 municipalities and unincorporated portions of the county. All 476.8 square miles of this county are covered by twelve individual fire departments with one ALS service provided by the county. In addition to providing county-wide ALS service, Johnson County provides all emergency service communications including the receipt of incoming calls for service (M. Hunter, personal communication, October 1, 1998).

Johnson County Medical Society

To ensure quality patient care in Johnson County, a diverse group of physicians banded together to govern the provision of emergency services. Their focus is upon procedures and protocols. The Medical Society does not involve themselves with operational decisions of emergency service providers. Therefore, Johnson County Medical Society does not determine the level of care an organization can provide, but establishes the quality of care to meet when performing at the various levels. In March of

1997, Johnson County Medical Society constructed and implimented a county-wide protocol which created a uniform performance of all BLS and ALS care of all emergency service providers. Thereby, opening the door for the provision of ALS services by multiple participants (S. Isaacson, personal communication, May 8, 1998).

Literature Review

One publication stands out as a comprehensive perspective in the management of pre-hospital care services. In 1995, Joseph Fitch, Ph.D. and associates published their book that provided true cases and issues in EMS operations. Of particular interest to this research are important considerations in upgrading an EMS system. Fitch emphasizes the importance of the organization's commitment to quality patient care for a successful implementation. Furthermore, a clear financial plan including a clear understanding and backing from local government allows a greater confidence level throughout the transition period. Fitch also discussed the need for a workable quality assurance program. This risk management program allows the medical director to participate fully in the training and supervisory aspects in the provision of patient care. The final point Fitch emphasized centered on the logical approach to the implementation of EMS care. Fitch feels that many services fail due to a rushed or non-phased introduction. Much care and time should be allowed to address the personnel adjustment and operational issues that will arise within an ALS transition (Fitch, 1995).

In March of 1996, Maurno discussed the patient care impact of a fire-based ALS service. Among his points was that patients survivability was directly linked to rapid response times and that fire-based EMS is second to none. Included was a study from the "Annals of Emergency Medicine" stating that fire-based services arrived on the scene of an emergency in an average of 5.5 minutes. On the

other hand, non-fire based services average a 7.3 minute response. Another point discussed the cost effectiveness of fire-based EMS. Maurno stated that fire stations are logically placed throughout an area based on the time it takes for a fire to reach its flashover. Due to this comprehensive coverage, fire departments are already established to ensure timely response. Therefore, Maurno feels that fire-based EMS allows two services for the price of one (Maurno, 1996).

In April of 1996, Krakeel assembled a roundtable article with diverse viewpoints on where fire-based EMS is or should be headed. One point suggested that since over 80 percent of all fire departments participate in EMS, they are in fact participating in managed health care. As a participant of this $5 billion industry it is their obligation to operate at the most optimal level. Furthermore, the lack of comprehensive cost research has negatively impacted local governments in the transition to optimal pre-hospital health care. Unexpected costs in training, certification, capital equipment, and personnel service budgets have burdened and even bankrupted local governments. Krakeel finally points out that fire-based EMS can be, and is, efficient when properly planned. Proper planning is aided with proactive medical direction to facilitate training and quality assurance; much more so than with existing BLS care. Fire-based EMS efficiency also ensures a better service mix to the community, thereby making the service superior while competing with private providers that attempt to takeover service (Krakeel, 1996).

Goebel, Gorman, and Jensen published an article in May of 1997 that discusses a credible way to predict the cost of delivering transport services. In doing so, they argue that most debates on EMS transport focus on the costs to be appropriately recognized by the service provider and prices to be charged the customer. This debate illustrates the apples and oranges comparison that public and private organizations have. Their method is to utilize a full-cost allocation model. This allows organizations to

make direct financial comparisons between public and private providers, set fair and competitive prices for services, evaluate the performance of fire agency programs based on costs and benefits to the community, perform comparisons with other agencies, and communicate more effectively with public officials and customers (Goebel, Gorman, Jensen, 1997).

Morris describes his experience with ALS pumpers in his 1993 article. It reviews the positive and negative aspects that the Phoenix Fire Department received with the implementation of ALS in 1978. Productivity in city-wide coverage is the main positive aspect that Morris points out. Phoenix utilized dual role personnel to perform both fire and ALS services on fire engines. Since only 30-50% of all EMS required ALS transport, Phoenix's ambulances were staffed with BLS attendants allowing ALS engines to return to service faster. This highly visible method of EMS provision rallied much community support. This support proved invaluable in regards to the survivability of the Phoenix Fire Department with Rural/Metro, Inc. located next door in Scottsdale, AZ. As far as the negative impacts received, Phoenix felt expected growing pains from the operational transition. Increased training costs, equipment maintenance, and differential pay issues were among the challenges faced. Morris explained the difficult challenge of justifying the time a fire engine is out-of-service for an "ambulance call". ALS engines that run 4000 calls a year can average being out-of-service 50% of the time. Educating the public in regards to the true needs of the community and benefits received in the utilization of ALS engines were the answer to Phoenix's challenges (Morris, 1993).

In August of 1998, Ludwig published an article highlighting the financial and operational difficulties large commercial ambulance companies are having. The two companies mentioned are American Medical Response (AMR) and Rural/Metro. Ludwig explains that fire-based EMS municipalities are making an impact due to their increasing efficiency of using dual role personnel. With

fire departments having an established infrastructure for fire protection, private providers are having to bid on contracts in which the only revenue that can be generated is whatever the provider collects from performing patient transports. The dependence private providers have with transport revenue presents further problems. Insurance profiles have required many providers to lower the transportation rates. In addition, the Health Care Finance Administration has begun to implement many reductions in ambulance reimbursement as a result of the 1997 Balanced Budget Act. These issues attribute to Rural/Metro's stock dropping from 37 to 10 3/4 points on the NASDAQ stock exchange in 1997 (Ludwig, 1998).

An article of regional interest by Thorp in 1993 was reviewed. In this article, two fire departments, both within the Kansas City-metro region, were included to examine their success with ALS engines. Lee's Summit Fire Department in Lee's Summit, MO responded that the integrated ALS engines have allowed greater flexibility in providing city-wide coverage. The Kansas City Kansas Fire Department states that the integration of ALS greatly improved customer relations, thereby making the transition more of a survivability issue (Thorp, 1993).

In order to ensure that EMS advancement was allowable by state law, a legal search was conducted. Article 61 of the Emergency Medical Services Act defines the medical authority for all service providers within the state of Kansas. Kansas law does allow for municipalities to determine the level of care within their boundaries.. Therefore, the legal authority is the municipal government.

Procedures

The research procedure used in the preparation of this paper began with a literature review at the National Fire Academy's-Learning Resource Center in April of 1998. Further reviews were

conducted at Southern Platte Fire Protection District's archives, as well as Overland Park Fire Department, Inc.'s library between April 1998 and October 1998.

The literature review focused on three issues. First, a search was made for standard cost accounting practices in the fire service industry. Second, an effort to find objective patient care benchmarks in the provision of advanced life support services was expended. Third, an attempt was made to find real case examples in regards to successful ALS integration of fire-based EMS services.

A survey called "ALS Feasibility Questionnaire" was conducted by OPFD's ALS feasibility committee to determine the employee's opinion regarding the provision of ALS (see AppendixA). The survey was developed and given to members of the operations division in June of 1998. Of the 110 surveys, 89 (81%) were completed and returned. The survey posed the four following questions: Would you be interested in becoming involved at the ALS level; Do you feel that ALS is in the best interest of the customer; Do you feel that ALS would be accepted on shift; and what career tract would you choose? The survey also included demographic information regarding the respondent's tenure and rank.

Multiple interviews were conducted with Fire Chief Dennis Meyers of the Overland Park Fire Department, Inc. from June 1998 to September 1998 regarding the organizational plan for implementation of ALS if and when the city of Overland Park decides to add that level of service.

Patrick Mays, Division Chief of Services and a 30 year veteran of the Overland Park Fire Department, Inc. was interviewed in September 1998 to provide a comprehensive history of fire and EMS services within the city of Overland Park, Kansas and Johnson County.

Steve Isaacson, EMS Coordinator for the Overland Park Fire Department, was interviewed in May, 1998 to gain a working knowledge of the Johnson County Medical Society in regards to their power over municipalities and fire service operations.

Dr. Lynn Brown, Medical Director for the Overland Park Fire Department, Inc. was interviewed multiple times in May 1998 in order to gain insight on the objective criteria used by medical professionals in the evaluation of quality EMS care.

Mary Hunter, Senior Planner for the Planning and Development Services Department with the city of Overland Park, was interviewed October 1, 1998 to obtain demographic information for Overland Park and Johnson county.

Ray Wright, Paramedic Program Coordinator for Johnson County Community College, was interviewed April 28, 1998 to gain an academic perspective in the implementation of fire-based ALS for the first time in Johnson county.

Limitations evident within the study found that information regarding an organization's budget and fee structure is highly sensitive. Information deemed "public information" is not as assessable as assumed by the author. Additional requests for information never materialized.

An additional limitation to the study is the political aspects when dealing with the provision of emergency medical services. Personal interviews mentioned that the current level of EMS provided has not been challenged in part because of political reasons. When asked to explain what they meant by "political reasons," all respondents stated that the city does not desire a political fight with the county. The author can only mention this as a limitation and focus upon what is objectively the best for the community as a whole.

Definitions

Basic life support (BLS) is the phase of emergency cardiac care that includes recognition of cardiac arrest, access to the EMS system, and basic CPR. It may also refer to the educational program in these subjects (American Heart Association, 1995).

Advanced life support (ALS) refers to attempts at restoration of spontaneous circulation using basic CPR plus advanced airway management, endotracheal intubation, defibrillation, and IV medication. ALS may also refer to the educational program that provides guidelines for these techniques (American Heart Association, 1995).

Results

1. How receptive is the organization to commit to quality ALS care?

According to the ALS feasibility questionnaire presented in June of 1998 the majority of the respondents see the provision of ALS as a positive thing. The following tables illustrate the organization's reception of the ALS issue:

Table 1

1. Would you be interested in becoming involved at the ALS level if the department were to go to that level and support you through the education required?

33%	**I would be interested in obtaining an ALS certification (paramedic)**
31%	**I would be interested in increasing my EMT skill level (EMT I/D-ALS)**
33%	**I would not be interested in becoming involved at the ALS level.**

Figure 1

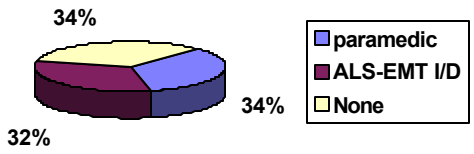


Table 2

2. Do you feel that expanding our current services to the ALS level would be in the best interest of our customer's?

89%	**Yes**
8%	**No**

Figure 2

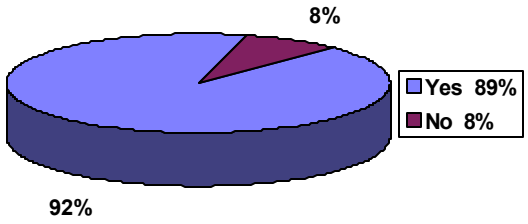


Table 3

3. Keeping in mind that there are numerous operational ways in which to provide ALS and this study is not committing to any one way, how do you feel providing ALS would be accepted on shift?

53%	**Accepted**
42%	**Guarded Acceptance**
6%	**Not Accepted**

Figure 3

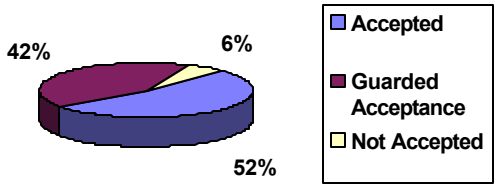
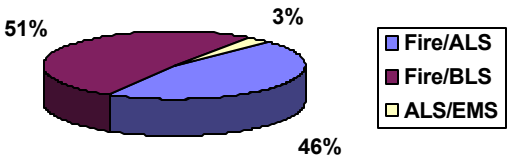


Table 4

4. If the department were to provide three different career tracts, providing a premium for Fire/ALS; which career tract would you choose?

46%	**Fire/ALS**
52%	**Fire/BLS**
3%	**ALS/EMS**

Figure 4



2. What will it cost the customer and organization?

In order to adequately represent the true cost to the customer, one must look at the customer as the community. In doing so, the true cost to the customer is the additional revenue required by the tax base to support the increased level of service. As you can see in table 5, the current budget allotment

for personnel services combined with the additional revenue produced from ALS ambulance transports exceeds the projected start-up costs. The start-up costs involved with providing this increased level of care consist of pay differentials for paramedic certifications, ALS capital equipment, and increased training costs. This advancement results in a greater level of care for the patient. The financial impact to the community as a whole is an increased level of care that is subsidized by the insurance companies.

Table 5

Table 5-ALS start-up financial summary

OPFD's capital needs for start-up:		**OPFD's current budget:**	
$191,452	Salary for 12 FF/Medics	$275,183	Salary for 18 firefighter positions
$3,940	Salary increase for current medics		
$99,924	Salary for 6 crew leaders.		
$295,316	**Personnel Services**	**$275,183**	**Personnel Services**
$18,000	Lifepak 12 with 12 lead capability		
$1,000	SpO2 With CO2 capability		
$19,000	**ALS Capital Equipment**		
$7,500	ALS Training		
$14,573	Billing Service @10.5%		
$22,073	**ALS Operating Costs**	**$138,790**	**EMS Revenue for 3rd & 4th quarter of 1999**
$336,389	First Phase Start-up Costs	**$413,973**	**Current funding for The First Phase**
Potential surplus	***$77,584***		

The cost to the organization is obviously not a financial concern in regards to the figures in Table 5. The true cost to the Overland Park Fire Department, Inc. will be the additional calls for service that will generate the increased revenue.

3. Can the organization provide a better level of care than is currently provided?

Response time analysis of Overland Park Fire Department, Inc. and Johnson Count Med-Act show that ALS intervention within the fire department can make a positive impact. As figure 6

illustrates, OPFD arrives on average one minute and twenty seconds faster than Med-Act (S. Isaacson, personal communication, May 8, 1998).

Table 6

Average response	Agency
4:16	**Overland Park Fire Department, Inc.**
6:06	**Med-Act**

According to the American Heart Association, patient survival dramatically increases with the ALS intervention. With heart muscle and brain cells deteriorating after four minutes, providing endotracheal intubation and medications eighty seconds faster on average will provide a better level of care (American Heart Association, 1995).

Discussions with Dr. Lynn Brown, Medical Director for the Overland Park Fire Department, Inc. emphasize that our patients are receiving poor ALS care. The simple fact is that our patients could be receiving advanced care earlier by utilizing fire-based ALS care (L. Brown, Personal communication, August 1998).

4. How does the organization intend to implement the increased level of care?

A literature review illustrated a possible approach used to achieve the increased level of care provided that the organization has answered all of their previous questions with accurate information, there are no unreasonable objectives; only unreasonable timelines. In order for successful implementation the organization must have timelines and goals that are specific, measurable, attainable,

realistic, and tangible. The focal point to drive all activities is the attainment of the highest-quality of patient care possible (Fitch, 1995).

As with many regional fire-based ALS providers, theirs has been implemented in a phased approach. The addition of paramedics requires a great deal of orientation, not only with the organization but with the medical community as well. The Overland Park Fire Department's management team feels that a phased approach is in the best interest of their organization and the customer. Provided in appendix B, is the proposed three year implementation of ALS service within their operation (D. Meyers, personal communication, June 17, 1998).

Unexpected findings included opinions that feel that too much of a good thing can be bad. Ray Wright, Coordinator for the paramedic program at Johnson County Community College, states that many services overlook the fact that too many paramedics within an area can lead to skill deterioration. Saturation thereby becomes a liability rather than an asset. A suggestion to avoid saturation include incresed communication and involvement with the medical directors. This helps to ensure clinical skill development continues in the classroom when there is not enough field experience available (R. Wright, personal communication, August 20, 1998).

Discussion

The common thread found with many studies in regards to the provision of fire-based ALS is cost-effective means of providing this service. Essentially, the public receives two services for the price of one. This answers the public's demand for greater value for its tax dollar. Since the greatest expense associated with any operation is personnel services, the increased costs associated with buying ALS equipment and providing paramedic training are small by comparison.

Another common issue is the timeliness that fire-based EMS can arrive to provide service. The International Association of Firefighters (IAFF) reports that on 9.1 percent of fire-based systems had response times greater than eight minutes, compared with nearly 43 percent for non-fire based EMS (Maurno, 1996).

One reason providers justify their advancement in EMS is that many feel the heat from large, well-financed private EMS providers. The stakes are very high. The loss of EMS within a fire department can mean personnel cuts, decreased budgets, and ultimately less response capacity (Ludwig, 1998).

In this author's interpretation, the competition for the public's tax dollar requires all services to operate at the optimum level. During the 1960's EMS development resulted in the attempt to reduce morbidity and mortality from injuries and acute illness in this country. At that time 50% of the nation's ambulance services were provided by morticians. Today, emergency services are competing with "the guy next door" regardless if they are a public or private entity. The debate will go on. It is in fact our duty as public servants to ensure the highest customer service possible, not only for the best patient care, but for our organizational survival. Traditional fire department operations are obsolete. Emergency medical services are not only the majority of our call-load, they represent the majority of our revenue as well. Those that refuse to understand and adapt may one day lose their department to me.

The Overland Park Fire Department, Inc. has gained a new perspective in the provision of ALS. They are poised to deliver the comprehensive package in the near future and continue improve (D. Meyers, personal communication, June 17, 1998).

Recommendations

The Overland Park Fire Department, Inc. stands at the threshold of not only a new millennium, but also an opportunity to enhance the service to our citizens. The following draft (see appendix C) is a logical approach to a seamless transition into advanced life support. This three phased plan has a 17-month window to the final stage. Our focus is the people we serve, our guide is the mission that binds us all.

The first phase is the initial stage that invests 18 paramedics into our organization for the opening of station #3. The life span of this stage is from August 1, 1999 to December 31, 1999. The objective of this phase is to educate and develop new personnel into our organization. Furthermore, this will provide a transition period into the provision of ALS. The funds required to materialize this plan are available within the current operation.

The second phase is the stage of the plan that incorporates ALS response and transport capability into OPFD. The life span of this plan is one year. The objective of this plan is to familiarize the medical community with the service as well as sharpen abilities under close evaluation. During this phase, OPFD will still rely upon Johnson County Med-Act for critical care services and transportation within the city. The funds required to materialized this plan are available within our current operation.

Phase three is the final component of ALS implementation. This plan places the full responsibility of all EMS out-of-hospital care under the direct authority of OPFD. Under the goals of this plan, OPFD will maintain strong working relations with Johnson County. The EMS system will be integrated through ongoing ALS training, continuous quality improvement (QA), and aggressive mutual aid response agreements. Additional funds will be required to materialize this plan. We strongly recommend the pursuit of city funds earmarked for the provision of ALS services by the county.

The primary focus and objectives for all three stages is to provide the best service possible. The phased implementation builds upon a history of success and dedication to the people we serve.

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Appendix A

ALS Feasibility Questionnaire

The department has organized a committee to research the FEASIBILTY of implementing ALS. Obviously this requires several areas to be studied, both tangible and intangible. We would like your input in the following areas. This is a voluntary survey and you do not have to identify yourself. Your input, however, is vital. Thanks for your time.

1. Would you be interested in becoming involved at the ALS level if the department were to go to that level and support you through the education required?

   33%__I would be interested in obtaining an ALS certification (paramedic).

   31%__I would be interested in increasing my EMT skill level (EMT I/D).

   33%__I would NOT be interested in becoming involved at the ALS level.

COMMENTS...

"already have MICT certification"

"I probably will not be here long enough to justify the commitment."

"already am"

"I would be interested in obtaining and maintaining an ALS certification. However, I am very concerned about the 'support' the Dept. would be able to provide during the initial educational demands. (Being able to let personell go on duty/shift trade availability etc...) Also what compensation would be given to those who do complete this? Is this individual now going to be pushed to an EMS 'side' in the Dept. (is this individual going to be assigned to the ambulance each shift?)"

"As long as it would not mean giving up the fire fighting aspect of my job."

"ALS if permitted for officers & compensation is luring"

"For compensation of pay"

"I would be crazy Not to take advantage!"

"However, if I were ALS/Fire I still don't want to run the ambulance every day"

"Let's start the training now to be prepared for this obvious trend in fire-service based EMS."

"only if one rotates through EMS"

"And I hope people who choose as I have do not get looked down on."

"With the different skills and certifications that I now must keep current, I do not believe that I would be a valuable asset to the program and be able to provide the level of customer service needed."

"Hire paramedics that already have some experience."

"Either or"

"I would do EMT I/D, Have to see how the department runs A.L.S. service."

This will enhance the definitive care to our customers by rapid intervention with ALS skills. I am always willing to advance my abilities."

"For those of us who are paramedics, I am sure that we would all agree that this training would benefit the department greatly. For those who want to go through medic school, I hope they are aware of all the time and effort that they will be facing."

"I am in paramedic now"

"I am currently taking paramedic at Penn Valley - I am about halfway done."

"This would hing upon the amount of off time we would need to participate in this class. I would rather do the majority of class while on duty somehow."

"We need to go to ALS level service ASAP"

"I would really like to see this offered to personnel that work for the department and know the system."

"To become cert. it would take too much time away from my family. If I was younger and single I would do it."

"The key to being successful in the MICT program would hinge on the F.D. support. It would be very difficult to receive certification & attend classes while having to trade time, & pay that time back."

2. Do you feel that expanding our current services to the ALS level would be in the best interest of our customer?

89%__Yes

8%___No

COMMENTS...

"could decrease response times for ALS care in some parts of the city"

"No doubt about it. Just do it right."

"Just as long as we were fully committed to the program."

"I do feel if we were operating with ALS personnell, we would be able to offer a higher quality of care to our customers. This would depend on how the system is accepted by the current ALS providers. (Teamwork)"

"We can do it much better than MedAct"

"Providing that the same level of care and Quality of care can be maintained."

"Depending on final implementation methodology"

"Difine best interest"

"quicker ALS response times"

"Just the improvement in intubation time will save additional lives."

"How can the richest and most progressive county in the state justify otherwise."

"As long as we don't get into a pissing match w/Med-Act"

"Initially, our service level might decrease, due to lack of experienced paramedics. Then our service would improve."

"OP would always have ALS in the city at all times."

"?"

"only if we did not contribute money to Med-Act. Lower tax-base to customer"

"See above"

"In stations other that station 4 where Med-Act and the FD show upa t the same time, I feel that the FD needs ALS on the scene 1st."

"of course!"

"There is no way the answer to this could be no. We would be able to have ALS care to the customer sooner in many scenarios."

"Would be (yes) if joint service w/Med-Act continued" - "No unless Jo.Co. Med-Act continues currently operating in this city! As Is!"

"Yes but the question if very vauge and not pointed."

"It would not if we 'took over' Med-Act without increasing our staffing to 'replace' Med-Act. There are no good reasons not to"

"& yes - Med-Act provides an exceptional service this would increase our depts. Political power with the city."

"I am not in favor of ALS in the control of the fire department. I feel the current system cannot be improved this way."

"As a supplement to Med-Act. Will allow an ALS individual on scene quicker."

3. Keeping in mind that there are numerous operational ways in which to provide ALS and this study is not committing to any one way, how do you feel providing ALS would be accepted on shift?

53%__Accepted
42%__Guarded Acceptance
6%___Not Accepted

COMMENTS...

"Some people would be in favor of providing the service but not personally. They would be willing to operate in a support role."

"Not because of ALS necessarily, but because of 'another new program'"

"I don't feel that there would be a big problem on shift with most. I do feel the younger and or newer employees will be more enthusiastic toward this move."

"Change always provokes concerns about the unknown"

"As long as the majority of members on your shift don't have 15 yrs. or more."

"compensation paridy will be a huge issue"

"Compensation needs to be appropriate for all levels - FF-Capt."

"attitudes are handed down from the top."

"Providing that ALS or EMT-I was not made mandatory."

"care must be taken to ensure we do not end up with two different department, EMS and Fire. Placing greater emphasis on one will cause a divided department."

"If officers would take care of problems on shift instead of just moving the preceived problem the program may have a chance."

"If the ALS program worked well, shifts would accept it better."

"vol?"

"There will be some aprehension by some of our personnel but that is normal with any change"

"Initially may be hard but change is hard. In the long run I believe people would appreciate & love it."

"I think some of the personel including myself wouldn't want to be on the ambulance all the time as a EMICT. I would rather serve on a ALS/pumper."

"Don't baby the spoiled brats - This is the future - move to it we are late as it is!! Don't cater to them!!"

"Can not answer truthfully without more knowledge"

"This question reflects more of an operational situation and how it would affect the shift"

"People fear change. People fear how it will take away from them and their situation. There should be more specifics to get full acceptance"

"I believe this could be accepted very readily. People who would like to have a ALS role would be able to participate more & those who wished to be EMT's could still do so."

4. If the department were to provide 3 different career tracts (i.e. Fire/BLS, Fire/ALS, or EMS/ALS), providing a premium for Fire/ALS; what career tract would you choose?

   46%__Fire/ALS
   52%__Fire/BLS
   3%___EMS/ALS

"With EMS being the majority of what we do, I feel obtaining an ALS cert. would give the largest impact to my ability to serve the community. However I would not want this in any way to effect my opportunities to fight fire. My job title would be FF/paramedic not Paramedic/FF."
"will this premium exceed a promotional premium?"
"what is the premium and make it known not 'it may be this'"
"Refer to comment on #1"
"only if one rotates through EMS"
"If I stay with EMT I/D."
"Should have 2 divisions Fire / ALS"
"I really think that this is really soon to ask this question."
"Fire/ALS premium would be detrimental to the department. If a person chooses to be a paramedic then that is their choice. Don't offer the premium before it is needed. A premium would add a or make a split in the department ranks."

DEMOGRAPHICS

Please circle the choice that applies to you. (Voluntary - you do not have to answer these)

Tenure/Longevity:

<5 years	5 - 10 years	10 - 15 years	>20 years
21%	17%	31%	13%

Rank:

EMS	FF 1-5	Lt. - Cpt.	BC & above
4%	53%	22%	2%

!!!!!!!!!!PLEASE RETURN TO JULIE AT 2B BY JUNE 20!!!!!!!!!!

Additional Comments

"Julie = Why are you in this? Thought you got out of OPFD EMS."
"Will the ALS people be compensated more & how much? Will ALS people run the rescue car all the time? Will other personnel with special training be compensated as much?"
"part time"
"Even if a Type 1 transport service does not work out, at least we could try and come up with a system where the medics we do have could use their skills on the calls. There is nothing worse than running a code and knowing that there is more that I could be doing!! I know that most of the time Med-Act is not very far behind us but in 3 min. Shocks could be delivered quicker, Airway secured and in some cases meds. delivered. We know that Med-Act has 2 medics on every call but there is absolutely no problem with having 3."
"Thanks!"
"I feel that there should be more follow up questionaire's to follow as information becomes available. Question #3 is really difficult to answer due to how the service would operate. There are a lot of good questions raised."

Appendix B

Three Phase Summary

Three Phase Financial Summary					
	How much we need:			How much we have:	
Phase 1	$295,316	Personnel Services		$275,183	Salary for 18 firefighter positions*
08/01/99-01/01/00			12medics & 6 crew leaders		
	$19,000	ALS Capital Equipment Start-up Costs			
	$22,073	ALS Operating Costs		$138,790	EMS Revenue for last half of '99
	$336,389	**First Phase Start-up Costs**		**$413,973**	**Current funding for The First Phase**
	Potential Surplus	***$77,584***			
Phase 2	$787,408	Personnel Services		$660,439	Salary for 18 firefighter positions*
01/01/00-01/01/01			12 medics/6 C.L./1 Director		
	$281,700	ALS Capital Equipment Start-up Costs			
			5-ALS Ambulances & 1 Back-up		
	$100,562	ALS Operating Costs		$552,967	Projected EMS Revenue for 2000
	$1,169,670	**Second Phase Start-up Costs**		**$1,213,406**	**Current funding for The Second Phase**
	Potential Surplus	***$43,736***			
Phase 3	$1,886,234	Personnel Services		$660,439	Salary for 18 firefighter positions*
1-Jan-01			21 new medics/1 ALS Trainer/3 Sup.		
	$289,800	ALS Capital Equipment Start-up Costs			
			Upgrade all pumpers		
	$111,368	ALS Operating Costs		$608,264	Projected EMS Revenue for 2001
	$2,287,402	**Final Phase Start-up Costs**		**$1,268,703**	**Current funding for The Final Phase**
	Potential Deficit	***($1,018,699)***			

First Phase- 5 month financial Summary				
How much we need:		**How much we have:**		
$191,452	Salary for 12 FF/Medics	$275,183	Salary for 18 firefighter positions	
$3,940	Salary increase for current medics			
$99,924	Salary for 6 crew leaders.			
$295,316	**Personnel Services**	**$275,183**	**Personnel Services**	
$18,000	Lifepak 12 with 12 lead capability			
$1,000	SpO2 With CO2 capability			
$19,000	**ALS Capital Equipment Start-up Costs**			
$7,500	ALS Training			
$14,573	Billing Service @10.5%			
$22,073	**ALS Operating Costs**	**$138,790**	**EMS Revenue for 3rd & 4th quarter of 1999**	
$336,389	First Phase Start-up Costs	**$413,973**	**Current funding for The First Phase**	
Potential surplus	*$77,584*			

Second Phase-one year financial summary				
How much we need:			**How much we have:**	
	$459,484	Salary for 12 FF/Medics	$660,439	Salary for 18 firefighter positions
	$9,456	Salary increase for current medics		
	$78,650	Salary for Division Head of EMS		
	$239,817	Salary for 6 crew leaders.		
	$787,408	**Personnel Services**	**$660,439**	**Personnel Services**
	$126,000	(7) Lifepak 12 with 12 lead capability		
	$6,000	(6)SpO2 With CO2 capability		
	$4,800	(3) Auto Vent		
	$6,000	(6) Drug Box and contents		
	$5,700	(6) Advanced airway kits		
	$15,000	(6) Medical Control Communications		
	$9,000	(6) Nitrous System		
	$3,000	(6) Suction units		
	$70,000	(1) Ambulance		
	$30,000	ALS Central Supply		
	$5,000	(5) ALS Unit Supply		
	$1,200	(6) Trauma Bags		
	$281,700	**ALS Capital Equipment Start-up Costs**		
	$25,000	Medical Director		
	$2,500	Lifepak Maintenance		
	$15,000	ALS Training		
	$58,062	Billing Service @10.5%		
	$100,562	**ALS Operating Costs**	**$552,967**	**Projected EMS Revenue for 2000**
	$1,169,670	Second Phase Start-up Costs	**$1,213,406**	**Current funding for The Second Phase**
	Potential Surplus	***$43,737***		

Final Phase Financial Summary				
How much we need:			**How much we have:**	
$804,097	Salary for 21 additional FF/Medics		$660,439	Salary for 18 firefighter positions
$762,893	Salary for 18 existing EMS personnel			
$174,044	Salary for 3 Supervisors			
$78,650	Salary for Division Head of EMS			
$66,550	Salary for ALS Training Member			
$1,886,234	**Personnel Services**		**$660,439**	**Personnel Services**
$90,000	(5) Lifepak 12 with 12 lead capability			
$6,000	(6)SpO2 With CO2 capability			
$14,400	(9) Auto Vent			
$6,000	(6) Drug Box and contents			
$5,700	(6) Advanced airway kits			
$12,500	(5) Medical Control Communications			
$72,000	Ambulance			
$31,500	(7) Life Aide-mechanical CPR			
$28,500	(1) Supervisor's vehicle			
$10,000	ALS Central Supply			
$12,000	(12) ALS Unit Supply			
$1,200	(6) Trauma Bags			
$289,800	**ALS Capital Equipment Start-up Costs**			
$30,000	Medical Director			
$2,500	Lifepak Maintenance			
$15,000	ALS Training			
$63,868	Billing Service @10.5%			
$111,368	**ALS Operating Costs**		**$608,264**	**Projected EMS Revenue for 2001**
$2,287,402	Final Phase Start-up Costs		**$1,268,703**	**Current funding**
Potential Deficit	*($1,018,699)*			

Overland Park Fire
Transport and Billing Data

'98 Statistical Information *6 month period, January through June.*

- BLS transports completed: 1139
- Charge per event: $225 + mileage ($4.50/mile)
- Medicare Allowable $178 + mileage
- Medicare reimbursement (80%) $142 + mileage
- Total Charges $279,819.00
- Collections $138,790.44
- Collection rate 66.1%

During the first 6 months of '98, the OPFD responded with Med-Act on **2382** dual response calls. ECC records identify all 201, 202, 101 and 102 events require a tandem response. Under the Alpha plan, OPFD units will be capable of transporting patients with the triage type **Yellow** and a percentage of **Red Stable** patients.

First Half '98 EMS transports divided by Department and triage codes:

Triage	Johnson County Med-Act	Overland Park Fire
Green	88	880
Yellow	758	201
Red Stable	457	6
Red Critical	74	0
Total	**1377**	**1087**

Assumption: The ALS OPFD ambulances will allow an increase in patient transport events by transporting 35% of the Yellow/Red Stable patients. Med-Act is currently transporting the majority of these patients. Our goal under Alpha is two fold: 1) to allow the Med-Act ALS crew to clear as soon as possible and be available for critical medical/trauma emergency. 2) Increased transport events will directly cause an increase in revenue.

- Tandem runs 6 months .2382
- OPFD transports 35% 834
- 834 x $350.00 ALS rate $291,900.00 Billable event increase
- Medicare ALS allowable $318.00
- Medicare pays 80% $254.00 = $211,836.00
- Collections Est. 65% $137,693

- *Estimated Annual Collection $275,386 above the BLS collection.*
- *Estimated Total Collections* ***$552,967.00***

Appendix C

First Phase-"Genesis"

Assumptions:

- Life span of this plan is five (5) months, Aug. 1, 1999- Jan. 1, 2000.
- Med-act is still our ALS provider.
- OPFD continues to provide BLS/Type II transport.
- No political green light for recapturing county funds.
- Hire eighteen (18) paramedics for the opening of station #3 & attrition. Six (6) Crew Leaders & twelve (12) paramedics.
- Six (6) Crew leader positions are budgeted to attract experienced paramedics.
- Funding is from transport revenue and approved 1999 budget.
- Eighteen (18) new hires will enter a two (2) month academy.
- Following the academy is a three (3) month station evaluation.
- Crew leaders would assist with training and evaluations of ALS skills.
- OPFD ambulances would continue to go out-of-service on regular alarm assignments.
- Station #5 would potentially staff an ambulance with staffing adjustments.
- No ambulance @ 3's.

First Phase-Staffing

Station	Standard Manning	Positions		Units
#1	(7/6)	Captain	Firefighter	421
		Lieutenant	Firefighter	451
		FF/Medic	Firefighter	
			Firefighter	441
#2	(7/6)	Captain	Firefighter	422
		Lieutenant	Firefighter	452
		FF/Medic	Firefighter	
			Firefighter	442
#3	(5/4)	Captain	Firefighter	453
		FF/Medic	Firefighter	
			Firefighter	
#4	(11/9)	Captain	Firefighter	424
		Lieutenant	Firefighter	454
		Lieutenant	Firefighter	474
		FF/Medic	Firefighter	
		FF/Medic	Firefighter	444
			Firefighter	
#5	(5/4)	Captain	Firefighter	425
	(35/29)	***FF/Medic***	Firefighter	435
			Firefighter	445*

* Potentially with staffing adjustments

The Second Phase-"Alpha"

Assumptions:

- Life span of this plan is one (1) year. 01/01/00-12/31/00
- Med-Act is still our ALS provider
- OPFD provides ALS response and transport.
- OPFD will bill ALS transports @ $350.
- All five (5) stations provide ALS capabilty.
- No political "green-light" for recapturing county funds.
- Provide for a Division Head of EMS.
- Eighteen (18) new hires and three (3) existing FF/Medics will staff the ALS units.
- Funding for personnel and capital equipment will be from transport revenue & the 2000 budget.
- OPFD ambulances would continue to go out-of-service on regular alarm assignments.
- Projected transport revenue is $552,976, a 35% increase from type II only.
- Realign staffing between 5's, 4's & 3's.

Second Phase-Staffing

Station	StandardManning	Positions		Units
#1	(7/6)	Captain	Firefighter	421
		Lieutenant	Firefighter	451
		FF/Medic	Firefighter	
			Firefighter	441
#2	(7/6)	Captain	Firefighter	422
		Lieutenant	Firefighter	452
		FF/Medic	Firefighter	
			Firefighter	442
#3	(4/4)	Captain	Firefighter	453
		FF/Medic	Firefighter	
#4	(11/8)	Captain	Firefighter	424
		Lieutenant	Firefighter	454
		Lieutenant	Firefighter	474
		FF/Medic	Firefighter	
		FF/Medic	Firefighter	444
			Firefighter	
#5	(6/5)	Captain	Firefighter	425
	(35/29)	***FF/Medic***	Firefighter	435
		FF/Medic	Firefighter	
				445

The Final Phase-Mercury

Assumptions:

- This plan is activated January 1, 2001.
- Med-Act is no longer our ALS provider.
- OPFD provides 12 ALS units within the city limits.
- All stations staff an ALS pumper & ambulance.
  - 5-Ambulances
  - 5-Pumpers
  - 1-Supervisor
  - 1-Back-up/440
- OPFD ambulances will ***not*** go out-of-service on regular alarm assignments.
- The political "green-light" ***has*** been given to recapture funds from the county.
- OPFD must recapture a minimum of $1,018,699 to fund this plan.
- Hire 21 additional paramedics.
- Hire ALS Training Instructor.
- Hire three (3) Paramedic Field Supervisors.
- We have total commitment.

Final Phase-Staffing

Station	StandardManning	Positions		Units
#1	(8/7)	Captain	***FF/Medic***	421
		Lieutenant	Firefighter	451
		FF/Medic	Firefighter	
		FF/Medic	Firefighter	441
#2	(9/7)	Captain	Firefighter	422
		Lieutenant	Firefighter	452
		FF/Medic	Firefighter	
		FF/Medic	Firefighter	442
		FF/Medic		
#3	(7/6)	Captain	Firefighter	453
		Lieutenant.	Firefighter	**443**
		FF/Medic	Firefighter	
		FF/Medic		
#4	(11/9)	Captain	***FF/Medic***	424
		Lieutenant	Firefighter	454
		Lieutenant	Firefighter	474
		FF/Medic	Firefighter	
		FF/Medic	Firefighter	444
		FF/Medic		
#5	(7/6)	Captain	***FF/Medic***	425
	(42/35)	***Lieutenant***	Firefighter	435
		FF/Medic	Firefighter	
			Firefighter	445